

Diagram illustrating the cross-section of a normal roadway shoulder, showing the transition from the normal roadway slope to the outer hinge line and beyond.

Key Dimensions and Features:

- Normal Roadway Slope:** The initial slope on the left.
- Transition to Normal Roadway Slope:** The area where the shoulder width begins to increase.
- Normal G.R. (Ground Line):** The original ground line.
- Edge of Normal Shoulder:** The boundary of the existing shoulder.
- Pavement:** The road surface.
- Outer Hinge Line - Normal Roadway Slope Beyond:** The line where the shoulder slope meets the normal roadway slope.
- Post No. 1:** The first post marking the shoulder edge.
- Post No. 6:** A post marking a specific point on the shoulder.
- Post No. 9:** A post marking the transition point.
- Dimensions:**
 - $*c$ 2' (TYP.)
 - 2' MIN.
 - 3' - 4'
 - $*x$ 10' MIN.
 - $*y$ 13' MIN.
 - $*z$ 15' MIN.
 - 90' MIN. ($*x, *y, OR, *z$)
- Slopes:**
 - 5:1 TAPER
 - 4:1 SLOPE OR FLATTER
 - 10:1 SLOPE OR FLATTER
- Option B Sub-Notes:**
 - $*x$ 3'-4' PREFERRED WIDTH
 - $*y$ 2' LIMITED SPACE,
 - $*z$ 1' DIFFICULT TERRAIN,

- * x 3'-4' PREFERRED WIDTH
- * y 2' LIMITED SPACE,
- * z 1' DIFFICULT TERRAIN,

OPTION B

POST NO. 9

POST NO. 2

POST NO. 1

REGULAR GUARDRAIL & POSTS

6'-3"

* a STEEL TUBES WITH SOIL PLATES WHEN MFR'S. SPECIFICATIONS REQUIRE

TYPICAL SPACING 6'-3" C.T.C.

* a STEEL TUBES WITH SOIL PLATES REQUIRED

6'-3" C.T.C.

ELEVATION

OPTION DETAILS

NOTES

1. ON TANGENT OR STRAIGHT SECTIONS OF ROADWAY "OPTION A" IS THE PREFERRED INSTALLATION. "OPTION B" IS TO BE INSTALLED WHEN SPACE DOES NOT PERMIT "OPTION A". "OPTION B" HAS THREE SUB-OPTIONS (* x, * y, & * z), * x IS THE MOST PREFERRED SUB-OPTION.
2. THE TERMINAL TYPE 10 MUST FOLLOW A STRAIGHT LINE OR A 50:1 STRAIGHT LINE TAPER AS SHOWN. THE TOTAL LAYOUT MUST MEET OR EXCEED THE REQUIREMENTS SET FORTH IN NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (TL-3), "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE OF HIGHWAY FEATURES".
3. FOR INSTALLATION DETAILS OF GUARDRAIL, POSTS, BLOCKOUTS, AND FITTINGS REFER TO STANDARD DRAWINGS G-1-A-1 THROUGH G-1-A-4. THE EXTRUDED HEAD, AND OTHER ITEMS SHOWN IN THE DETAILS ARE FOR THE ET-2000 TERMINAL. FOR END TREATMENT DETAILS SPECIFIC TO THIS AND OTHER TERMINALS SEE THE INFORMATION PROVIDED BY THE MANUFACTURER. THE LIST OF VIABLE TERMINAL ENDS ARE: ET-2000, BEST, SKT 350, AND LET. AN "EQUIVALENT" TYPE 10 TERMINAL MUST MEET THE REQUIREMENTS FOR USE AS A "NCHRP 350 (TL-3) APPROVED TERMINAL".
4. THE OUTSIDE NUTS ON THE ANCHOR CABLE SHALL BE TORQUED AGAINST INSIDE NUT A MINIMUM OF 100 ft./lbs.
5. WHEN A TYPE 10 TERMINAL IS CONSTRUCTED ON A HORIZONTAL CURVE, PLACE THE TERMINAL OFF OF THE "TANGENT (BACK OF RAIL)". PLACE "OPTION A" ON A 50:1 TAPER FROM THE TANGENT (BACK OF RAIL) AT POST NO. 9. USE "OPTION B" ON OUTSIDE CURVES AND "OPTION A" ON INSIDE CURVES. DO NOT PLACE THE TYPE 10 TERMINAL ON THE INSIDE OF A GREATER THAN 8° HORIZONTAL CURVE.
6. NOT TO SCALE.

SUB- NOTES

- * a TOP OF STEEL TUBES SHALL BE EXPOSED SAME AS POST NO.1 (SEE DETAIL "A")
- * b END GUARDRAIL PAD AT $\frac{1}{4}$ OF POST NO. 6, USE (+/-) 5:1 TAPER BACK TO BALLAST SHOULDER
- * c 1' MIN. IN DIFFICULT TERRAIN (SEE STD. DWG. G-1-A-1)

POST NO. 2

SEE NOTE NO. 4

POST NO. 1

1'-9"

(TYP.) 3"

1'-2 1/2"

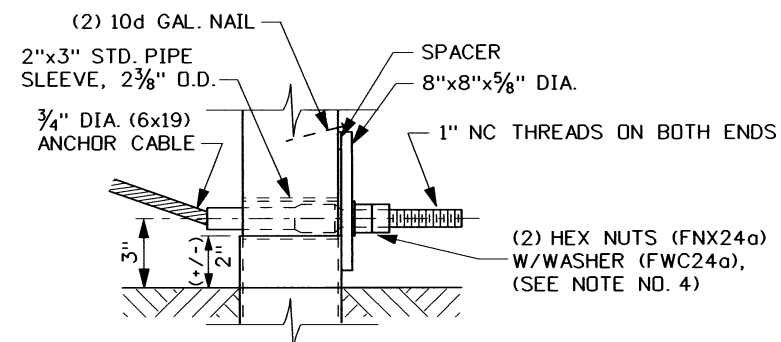
DETAIL "A"

(2) 5/8" DIA. x 9 1/2" BOLTS, NUTS, W/MULTIPLE WASHERS

SOIL PLATE ITEM NO. P

ELEVATION
EXTRUDED END & ANCHORAGE ASSEMBLY
(NOT TO SCALE)

CURVED ROADWAY TERMINAL PLACEMENT




DETAIL "A"
(NOT TO SCALE)


REVISIONS									SCALES SHOWN
NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	ARE FOR 11" X 17"
1	6-01	MSM							PRINTS ONLY
2	1-04	MSM							
3	12-04	MSM							CADD FILE NAME glm_0506.std
4	5-06	MSM							DRWG. ORIG. DATE: JANUARY, 2000

**IDAHO
TRANSPORTATION
DEPARTMENT**



BOISE IDAHO


ASSISTANT CHIEF ENGINEER (DEVELOPMENT)


CHIEF ENGINEER

STANDARD DRAWING

GUARDRAIL TERMINAL TYPE 10

REQUIRES STD. DWGS. G-1-A-1 THRU G-1-A-4

English

STANDARD DRWG. NO.

G-1-M

SHEET 1 OF 1

